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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/711,567	11/13/2000	Edward F. Tokas	031221-058	8260
193	7590	10/06/2004	EXAMINER	
LORD CORPORATION PATENT & LEGAL SERVICES 111 LORD DRIVE CARY, NC 27512			KNABLE, GEOFFREY L	
		ART UNIT	PAPER NUMBER	
		1733		

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/711,567	TOKAS ET AL.
	Examiner	Art Unit
	Geoffrey L. Knable	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 12 July 2004.

2a) This action is **FINAL**.                                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 84-92 and 99-103 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 90-92 is/are allowed.

6) Claim(s) 84-89 and 99-103 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 99-103 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 99 is considered indefinite for the same reasons set forth in the last office action (and detailed with respect to previous claim 85). Although the ambiguous new language that the catalyst is applied "prior to polymerization" was removed from claim 85, it remains in claim 99. Dependent claims 100-102 as well as new dependent claim 103 are included in this rejection by virtue of their dependency on claim 99.

Additionally, new claim 103 raises a new ambiguity. In particular, claim 99 defines that the first substrate surface comprises an elastomeric material. New dependent claim 103 then defines what materials the first substrate surface is selected from. However, the group of materials defined in new claim 103 includes both elastomers (consistent with the last paragraph on page 22 of the specification) and what are described in the specification in the first paragraph on page 23 of the specification as "engineering plastic substrates". This defining that the apparently elastomer substrate of claim 99 can be apparently non-elastomeric materials renders the scope of these claims, and particularly the scope of the materials for the first substrate, indefinite. Further, to the extent that the presence of new claim 103 is now defining that the first substrate can have an elastomer surface but be one of the engineering plastics defined

therein, this does not appear to be described in the original disclosure, this being treated in the following description/new matter rejection.

3. Claims 99-103 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 99 is considered to include subject matter that was not described in the original disclosure, i.e. is new matter, for the same reasons set forth in the last office action (and detailed with respect to previous claim 85). Although the new language that was considered unsupported, i.e. that the catalyst is applied “prior to polymerization,” was removed from claim 85, it remains in claim 99. Again, the original disclosure does not explicitly describe or characterize the application of the catalyst with respect to the “polymerization” but rather simply as being applied or part of the substrate prior to application of the metathesizable polymer. Note for example that the new language would be inclusive of applying a cold (i.e. such as to prevent polymerization) premixture of catalyst and monomer or applying the catalyst with a dual nozzle along with but separate from the metathesis polymer to a substrate, this seemingly being application “prior to polymerization”. The original disclosure however seems principally directed to preapplication or preinclusion of a catalyst at the substrate surface and does not characterize the invention in terms of the application of the catalyst relative to the “polymerization”. This new description is thus not described in the specification in such

a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. Dependent claims 100-102 as well as new dependent claim 103 are included in this rejection by virtue of their dependency on claim 99.

Additionally, new claim 103 raises issues of lack of description/new matter. In particular, as noted above, claim 99 defines that the first substrate surface comprises an elastomeric material whereas new dependent claim 103 then defines what materials the first substrate surface is selected from, these including what are described in the specification in the first paragraph on page 23 as "engineering plastic substrates". This defining that the elastomer substrate of claim 99 can be or include apparently non-elastomeric engineering plastic materials, is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. In other words, to the extent that the presence of new claim 103 is now defining that the first substrate can have an elastomer surface but include one of the engineering plastics defined therein, this is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. is considered to be new matter.

4. Claim 92 is objected to because of the following informalities: In claim 92, it would be more consistent if the preamble defined a tire laminate (the claim has

nevertheless been read as directed to a tire laminate by virtue of its dependency).

Appropriate correction is required.

5. Claims 99-103 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Suzuki et al. (US 5,137,785).

This reference is applied for the same reasons as set forth in the last office action. As to new claim 103, note the materials described at col. 6, lines 14-20 of Suzuki et al.

6. Claims 84-89 and 99-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted state of the prior art taken with Mühlbach et al. (US 5,973,085), Ofstead (US 3,935,179) and Suzuki et al. (US 5,137,785), and optionally further in view of Lesser (US 2,978,354).

This rejection is maintained for the same reasons as set forth in the last office action. As to the amendments to claim 84, the claims are again directed to the final product, not the method for its formation and it is again submitted that an article with a metathesis polymer adhesive would reasonably be the same as that claimed, i.e. a laminate of two substrates bonded with a catalyzed metathesis polymer therebetween bonding the substrates to one another. While the processing is admittedly different, it has not been conclusively shown or convincingly argued why the claimed steps would produce a materially different product – note also MPEP 2113. Further, even if the processing did affect the product, note the rejection including the Lesser patent. As to new claim 103, the elastomer materials for which metathesis polymers would be

expected to bond include materials within the claimed grouping – note the materials described at col. 6, lines 14-20 of Suzuki et al.

7. Claims 99-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 5,137,785) as applied above, and further in view of Lesser (US 2,978,354) as applied in the last office action.

8. Claims 90-92 are allowed for reasons already of record.

9. Applicant's arguments filed July 12, 2004 have been fully considered but they are not persuasive as regards any remaining rejections.

The 35 USC 112 rejections of claims 84 and 85 have been withdrawn in light of the amendments to the claims. The 112 rejections of claims 99-102 remain and new 112 rejections were necessitated with the presentation of new claim 103 – note the statements of rejection above. Additionally, it is noted that applicant urges that any construction of claim 99 that would encompass complete continuous coverage is unreasonable since the specification distinguishes continuous coverage from selected coverage. Importantly, however, the specification makes this distinction by referring to coverage “only” in predetermined selected areas. Claim 99 however does **not** use the term “only” in this context and it would be unreasonable to read it into the claims.

As to the prior art rejections, the rejections of claims 84, 85 and 87-89 based upon Suzuki et al. as a primary reference have been withdrawn in light of the amendments to the claims and applicant's arguments, the following added for emphasis. In particular, there is insufficient basis to conclude that a bulk molded metathesis polymerization substrate layer as in Suzuki et al. would provide a product

that meets the present claim 84 requirements in which the article was formed by pre-applying a metathesis catalyst at the first substrate surface, the catalyst maintaining activity in the presence of oxygen and moisture until contacted to the metathesizable material, and providing the metathesizable material as a liquid or paste by spraying, dipping, brushing, wiping, or roll-coating on the second substrate surface, this followed by contacting the catalyst treated first substrate surface with the metathesizable material treated second substrate under normal ambient conditions without an exterior energy source so that the metathesizable material undergoes a metathesis reaction and forms the adhesive that bonds the first substrate surface to the second substrate surface.

The rejection of claims 99-103 over Suzuki et al. will however be maintained. These claims are again directed to the final product, not the method for its formation and it is again submitted that the reference article would reasonably be the same as that claimed, i.e. a laminate of two substrates bonded with a catalyzed metathesis polymer therebetween bonding the substrates to one another. While Suzuki et al. may apply the catalyst with the material, it has not been conclusively shown or convincingly argued why the claimed step of "applying the catalyst prior to polymerization" would produce a materially different product – note also MPEP 2113. Unlike claim 84, claim 99 does not describe any particulars of the application process for the metathesizable material in any manner that would help define over the reference teachings and further it does not describe contacting of the catalyst treated first substrate surface with the metathesizable material treated second substrate under normal ambient conditions

without an exterior energy source so that the metathesizable material undergoes a metathesis reaction and forms the adhesive that bonds the first substrate surface to the second substrate surface. In fact, claim 99 is not inconsistent with or exclusive of an article formed by a bulk polymerization process in which an internally incorporated catalyst effects the metathesis reaction.

As to the remaining rejection, it is argued that Mühlebach et al. is

"directed to coatings. There is no disclosure of bonded articles of 2 substrates. General suppositions concerning what is taught by Muelbach (sic) and Ofstead are nonenabling to result in the claimed articles. Both references do not teach adhesives, but coatings."

This argument has been carefully considered but is unpersuasive. Mühlebach et al. (note esp. col. 2, lines 12-35; col. 52, lines 10-12 and 64+) and Ofstead (note esp. col. 2, lines 25-28) clearly disclose catalyzed metathesis polymers useful as **adhesives**. The use of the term "adhesive" would have been reasonably read by the ordinary artisan as implicitly defining (or certainly rendering obvious) bonding of two substrates since an adhesive is normally and typically considered by definition as a material that bonds two materials together. In fact, Mühlebach et al. even expressly refers to "adhesives for gluing substrates" and "for firmly joining the most diverse materials" at col. 52, lines 10-12 and 64+. Further, since use of polymerized materials in general as adhesives is *extremely* well known, the artisan would have been expected to have been readily able to practice the inventions of the references – i.e. if the artisan can form a coating, they certainly would have understood how to adhere substrates together with

the same coating material. An argument that the suggestion to use metathesizable materials as an adhesive is non-enabling is therefore unconvincing.

Further, these references again are considered to have provided evidence that it is understood in this art that a wide variety of metathesis polymers have known utility in a variety of roles including as adhesives. In other words, it is considered that the artisan would have appreciated that metathesis polymerization in general would have expected utility in coatings as well as adhesives with a reasonable expectation of success. In light of the known application of metathesis polymers as adhesives in general with apparently broad applicability as well as the known fact that these polymers bond effectively to various materials including elastomer and metals, it would have been *prima facie* obvious to utilize any of the known catalyzed metathesis polymer systems, including the conventional systems disclosed/claimed, anywhere an adhesive between materials is needed including in particular when metal and/or elastomer materials are to be bonded for only the expected results. While the secondary references may relate to slightly different catalysts systems that may in some cases need activation, these references are still considered to establish an understanding and an expectation that metathesis polymers *in general* would be expected to suitably act as adhesives. Insofar as there is no indication that applicant's catalyst systems (e.g. ambient curing) are in any way new or unknown, it is not considered unobvious to utilize known metathesis polymers/catalysts for one of their known uses, it being stressed that the present claims are very broadly directed to a bonded article using a very broadly defined "metathesis polymer".

It is also argued that Mühlebach et al. and Ofstead are not directed to contact metathesis polymerization. While it is agreed that these references do not preapply the catalyst that effects the polymerization when contacted with the metathesizable material, it is again stressed that the claims are again directed to the final product, not the method for its formation and it is submitted that an article with a metathesis polymer adhesive would reasonably be the same as that claimed, i.e. a laminate of two substrates bonded with a catalyzed metathesis polymer therebween bonding the substrates to one another. While the processing is admittedly different, it has not been conclusively shown or convincingly argued why the claimed steps would produce a materially different product – note also MPEP 2113. Further, even if the preapplication of the catalyst affects the product, such was considered obvious in light of Lesser.

In summary, the cited prior art is considered to evidence that a wide variety of polymers formed by metathesis polymerization have recognized utility as adhesives and it is therefore submitted that the ordinary artisan would have expected that any of the well known and conventional metathesis polymers would be suitable and effective as adhesives – i.e. the artisan would have reasonably expected such conventional materials to successfully function as adhesives. Further, it is considered that either premixing of the catalyst or preapplying the catalyst would have been obvious, it further in any event not being considered that either method to catalyze the reaction would produce a materially different product than that claimed. It also has not being shown or established that the manner of formation of the product, namely by contact metathesis,

provides any but the expected results (e.g. improved pot life, processing, etc.) in the final product.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Geoffrey L. Knable  
Primary Examiner  
Art Unit 1733

G. Knable  
October 2, 2004